

REMARKS

This response amends claim 1 and claim 6. Support for the amendments can be found at, e.g., pages 4-6 of the specification.

At pages 2-3 of the Office Action, the Examiner rejects claim 1 under 35 USC 102(b) as being anticipated by Higgins (US Patent No. 5,339,385). Moreover, at pages 3-4, claim 3 is rejected under 35 USC 103(a) as being unpatentable over Higgins in view of Princen (IEEE Transactions on Signal Processing, vol. 43, No. 11, November 1995). At pages 4-8, claims 2 and 4-6 are rejected under 35 USC 103(a) as being unpatentable over Higgins in view of Chen (US Patent No. 6,314,395). These rejections are respectfully traversed.

Higgins, Princen, or Chen, standing alone or in combination, fail to disclose, teach, or suggest, *inter alia*, the following features recited by claim 1 of the present application:

“computing a distance of each element between the speech features and the reference template according to a matching result of (iv), and summing the computed distance to obtain a distance scoring; wherein each of the elements in the speech features and the reference template is a binary number”.

Higgins discloses a speaker verification system where speaker identification judgements are made based on nearest-neighbor distances computed between presently uttered words and stored enrollment words.

Higgins teaches using a computational method (different from that of the present application) by calculating the Euclidean distance between the test session and the enrollment session.

Claim 1 has been amended to include the computational method for calculating the distance scoring between the detected speech features and the reference template. Since the distance scoring is obtained by summing the differences between binary numbers, a bit operation can be used to simplify the operational implementation. Comparing to the computational method of Higgins, the claimed invention reduces the computing complexity. Since the elements in the speech features and the reference template are binary numbers, the algorithm can be easily implemented using a bit operation.

MPEP 2131 states that a "claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," quoting *Verdegaal Bros v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Under MPEP 2143, to establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. As discussed above, the Applicants believe that Higgins do not disclose the above-quoted features of claim 1. The Examiner does not show that Chen or Princen, or any other prior art references teach these features either. Thus, the Applicants believe that claim 1 is patentable. Claims 2-5 are also patentable, at least by virtue of their dependency from claim 1.

Claim 6 recites, in part, "a reference template which are required in

the operations of the digital signal processor, wherein each element of the reference template is a binary number". As mentioned above, the Applicants believe that this feature is not disclosed in the cited references. Thus, claim 6 is also patentable.

The Applicants respectfully submit that all pending claims are patentable and reconsideration of the present application is respectfully requested.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account No. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.


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(Date of Deposit)

Troy Guangyu Cai

(Name of Person Signing)



(Signature)

2/27/04

(Date)

Respectfully submitted,



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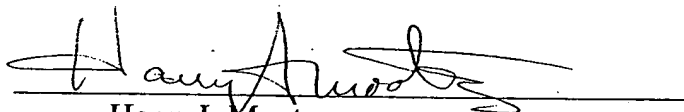
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